1900.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE

BOROUGH OF MAIDSTONE.

CHARLES PYE OLIVER, M.D., Lond.,
D. P. H., M. R. C. S., L. R. C. P.,
Fellow of the Incorporated Society of Medical Officers of Health.

8006

Maidstone:
PRINTED BY W. S. VIVISH & Co., 28, KING STREET.

1901.

Digitized by the Internet Archive
in 2017 with funding from
Wellcome Library

https://archive.org/details/b29780433

BOROUGH OF MAIDSTONE.

REPORT OF THE MEDICAL OFFICER OF HEALTH,

FOR THE YEAR 1900.

To the Urban District Council.

MR. MAYOR AND GENTLEMEN,

The statistics that appear in the following Report are based on the assumption that the population of the Borough has increased at the same rate, since the census of 1891 was taken, as it did during the intercensal period of 1881-91.

The population thus estimated of the two sanitary districts into which Maidstone is divided would be at the middle of 1900 :—

For East Maidstone	17,699
„ West Maidstone........	16,959
„ Whole Borough	34,658

The above estimate, however, is probably far too high, seeing that in recent years the Birth rate has been steadily falling, the annual average during the previous decade (1881-1891) being 29·9 per 1,000, while the annual average during the decade just completed (1890-1900), is but 24·4.

In my last Report I remarked that the margin of uncertainty increases as we near the end of an intercensal period, and now that this period has virtually terminated, this consideration affects the accuracy of our estimate with its full force; however, the basis of calculation adopted is the usual and most reliable one we have at our command.

From out of this population there were registered:—

Of Births	813
„ Deaths	548
„ Marriages	282

So that the rates per thousand per annum were:—

Of Births	23·45
„ Deaths	15·81
„ Marriages	8·13

BIRTHS.—Owing to the re-arrangement of the registration districts, it is now impossible for the Births to be allocated to East and West Maidstone respectively, these divisions being no longer recognized by the Registrar-General.

The average annual Birth rate for the ten years 1890-1899 inclusive, was 24·5, this year being thus lower, viz., 23·4.

The Birth rate in the United Kingdom for 1900 was 29·0 per thousand.

The number of male children born was 393, 19 of whom were illegitimate; 420 females were born, of whom 22 were illegitimate. It is thus seen that 5·04 % of the total Births in Maidstone were illegitimate.

DEATHS.—In East Maidstone there were 322 deaths, constituting a Death rate of 18·1 per thousand per annum, against an average of 289 for the previous ten years, or a Death rate of 16·8.

In West Maidstone there were 226 Deaths, giving a Death rate of 13·3. The average for the previous ten years being 237, or a Death rate of 14·6.

The Death rate for the United Kingdom for 1900 was 18·3 per thousand, so that Maidstone, with its Death rate of 15·81, compares favourably.

In Tables I. and II. of the Appendix details of the various years, with the rates, are inserted. In Table IV. the 548 Deaths are classified into 32 classes, according to the new schedule issued by the Local Government Board, with details of ages and localities.

The rate of Infantile Mortality, that is to say Deaths per thousand of Births under one year of age is 115, the average of the previous ten years being 127. This is very satisfactory ; the improvement being steadily maintained in each of the four quarters, as shown in the subjoined Table :—

Deaths per 1,000 Births of Children under one year in Maidstone.

Year.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Whole Year.
1870	165	97	263	115	160
1871	258	107	278	117	190
1872	181	116	171	144	153
1873	136	118	246	127	157
1874	182	93	261	119	164
1875	187	106	157	165	154
1876	147	112	141	98	124
1877	211	140	187	84	155
1878	161	176	209	155	175
1879	135	145	122	165	142
Average	176·3	121·0	203·5	128·9	157·4
1880	135	120	229	118	153
1881	120	119	122	64	106
1882	138	110	100	151	125
1883	218	79	122	139	138
1884	189	78	159	125	138
1885	140	75	187	139	133
1886	118	105	191	166	142
1887	80	59	158	114	103
1888	167	136	167	145	154
1889	132	99	173	137	135
Average	143·7	98·0	160·8	129·8	132·7
1890	136	117	93	113	115
1891	140	113	150	157	140
1892	128	87	110	80	102
1893	64	90	222	80	111
1894	167	119	112	116	128
1895	133	62	172	157	129
1896	156	82	129	162	133
1897	143	80	219	100	138
1898	153	89	234	155	152
1899	81	58	239	197	129
Average	130	89	168	131	127
1900	108	87	143	128	115

PHTHISIS and other tubercular diseases account for 64 deaths, giving a rate of 1·84 per thousand.

This rate is unusually high, but it must be borne in mind that in this are included not only what is familiarly known as Consumption, but also Consumption of the bowels, of the brain, and of bones.

Influenza caused 24 deaths, the number being equally distributed between East and West Maidstone. This scourge, though milder in form than in previous years, visited Maidstone in the latter half of December, 1899, was sudden in its onset, widespread in distribution, and left at the end of January, equally as suddenly as it came.

WHOOPING COUGH has been prevalent in a mild degree, having caused 4 deaths, all of which occurred in East Maidstone.

MEASLES was prevalent in the early part of the year, but was only responsible for 4 deaths: 2 in East, and 2 in West Maidstone.

SCARLET FEVER was prevalent throughout the year, 45 cases being reported, but all were of a very mild character, not one case having died. At one time we were threatened with an Epidemic of this Malady. It came to my knowledge that a boy in a state of desquamation from Scarlet Fever, was mingling with others. Enquiries were at once instituted, especially as to the state of health of all boys attending the same school as this boy, when it was discovered that four other boys in attendance at this school were also suffering from the later effects of Scarlet Fever; the cases, however, being so mild, that the mothers did not consider it necessary to seek medical advice. The children were isolated, the school closed, and what might have been a serious epidemic, averted.

ENTERIC FEVER was notified 28 times, 11 cases being reported as existing in East Maidstone, and 17 in West. Of this number 12 were contact cases, of the remaining 16, 7 were connected with sanitary defects, 2 with eating oysters, 2 were imported into the town, 1 was traced to drinking impure water, whilst in 3 cases the cause could not satisfactorily be ascertained. The number of contact cases is somewhat heavy, but 10 of these occurred from an initial case in one of the large institutions in Maidstone. The initial case was imported, and was of such a mild character that the patient was able to continue her ordinary duties for some time before the malady fully announced itself; these duties bringing her intimately in contact with a large number of people. The case mortality was very low, only 2 dying = 7%.

The Deaths from Diarrhœa were very low, being only 11, 9 of which occurred in the third quarter. In the previous year there were 20 Deaths, the average, however, being 12·9 per annum.

DIPHTHERIA.—The one circumstance that stands out with special prominence in the sanitary history of the Borough for the past year is the remarkable decrease in the number of notifications of Diphtheria.

The excessive prevalence of this malady in Maidstone some two years ago led to an inquiry from the Local Government Board, in consequence of which my predecessor in office prepared a special report, dated March 23, 1899, in which he states that "Diphtheria became unusually prevalent during the fourth quarter of 1888, and has continued so, since," and a glance at the following Table for the past four years will show that whilst there was a large and steadily increasing number of notifications during the years 1897-8-9, this was followed in the year 1900 by a remarkable fall from 249 to 50, being a reduction of four-fifths as compared with the number for the previous year :—

NOTIFICATIONS OF DIPHTHERIA FOR THE PAST FOUR YEARS.

1897	211 Cases.
1898	240 ,,
1899	249 ,,
1900	50 ,,

This very gratifying decrease may be attributed to the following circumstances (1) During the past twelve months a number of ventilating shafts have been erected in connection with the main sewers, and some 600 w.c.'s have had flushing cisterns attached, resulting in a marked decrease in the number of complaints of offensive smells from the street manholes. (2) On entering on my duties in November, 1899, the school in which the malady was exceptionally rife—a Public Elementary School—was immediately closed for four weeks, this was followed by a marked improvement, the number of cases falling from 29 in November to 7 in December. (3) Acting in my capacity as Medical Officer of Health, I have inquired personally and most closely into the history and circumstances of every case of Diphtheria coming to my knowledge, and I have the satisfaction to report that my advice as regards isolation and other preventive measures has been readily acted upon by the various families concerned, whilst the special instructions which I have found it necessary to give from time to time to the Sanitary Inspector have been most zealously and efficiently carried out.

Of course it is impossible to say at present whether any unrecognised cause—climatic or otherwise—may have been in operation, but subject to this possibility there is good ground to hope that the continued application of the measures referred to may be attended with similar encouraging results to those which have already followed.

Below is a Table which gives the rates of Mortality of three of the principal classes of Disease.

Disease.	1900.		
	East Maidstone.	West Maidstone.	Whole Borough.
Seven Zymotic Diseases	1·07	·48	·77
Phthisis, and other Tubercular Diseases	1·75	1·94	1·84
Diseases of the Respiratory Organs	3·89	2·53	3·23

The Notification Act.—The following is a summary of the Notifications received:—

Disease.	1900.	Previous 9 Years average.
Diphtheria	50	133
Croup	..	
Scarlet Fever	45	78
Typhoid Fever................	28	229
Continued Fever..............	..	
Erysipelas	20	28
Puerperal Fever	..	3·6
Small Pox	1	3·6

DIPHTHERIA AND CROUP.

Quarter.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	Previous 9 Years average.
1st	12	36	16	28	18	10	44	40	94	16	33
2nd	3	27	53	14	8	7	50	24	47	9	26
3rd	5	15	43	17	16	9	83	80	36	9	33
4th......	13	28	46	13	30	27	34	96	72	16	39
Year	33	106	163	72	72	53	211	240	249	50	133

SCARLET FEVER.

Quarter.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	Previous 9 Years average.
1st	7	..	30	37	19	8	14	2	17	8	15
2nd	4	4	90	18	9	14	9	5	17	19	19
3rd	4	15	79	27	13	11	4	4	22	7	20
4th......	5	25	107	17	29	23	2	1	14	11	24
Year	20	44	306	99	70	56	29	12	70	45	78

TYPHOID AND CONTINUED FEVER.

Quarter.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	Previous 9 Years average.
1st	4	2	4	5	5	4	4	14	5	13	5
2nd	2	3	10	3	5	3	..	5	8	2	4
3rd	2	3	11	2	5	3	1280	8	4	2	145
4th......	9	8	9	2	6	6	604	8	6	11	73
Year	17	16	34	12	21	16	1888	35	23	28	229

ERYSIPELAS.

Quarter.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	Previous 9 Years average.
1st	8	12	14	13	2	5	2	6	9		7
2nd	5	6	13	5	2	3	2	4	6	5	5
3rd	8	7	15	4	7	5	2	7	2		6
4th......	4	12	18	9	6	6	7	12	6	9	7
Year	25	37	60	31	17	19	13	29	23	20	28

PUERPERAL FEVER.

Quarter.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	Previous 9 Years average.
1st	1	3	2	3	1	3	3	..	1	..	1·7
2nd	..	1	2	2	..	..	..	..	1	..	·6
3rd	1	..	3	..	..	..	1	..	..	..	·5
4th......	..	..	2	..	1	..	..	1	1	..	·5
Year	2	4	9	5	2	3	4	1	3	..	3·0

SMALL POX.

Quarter.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	Previous 9 Years average.
1st	1	..	1	20	..	..	..	..	..	..	2·4
2nd	..	..	..	4	..	..	..	1	..	..	·4
3rd	..	..	..	4	..	..	..	..	..	..	·4
4th......	..	..	1	1	..	..	..	..	..	1	·2
Year	1	..	2	29	..	..	..	1	..	1	3·4

TOTAL NOTIFIABLE ZYMOTICS.

Quarter.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	Previous 9 Years average.
1st	33	53	66	106	45	30	67	62	126	40	65
2nd	14	41	168	46	24	27	61	39	79	35	55
3rd	20	40	156	54	41	28	1370	99	64	21	208
4th......	31	73	183	42	72	63	647	118	99	48	147
Year	98	207	573	248	182	148	2145	318	368	144	475

From the first Table it will be observed that without exception there has been a diminution in the number of notifications of each of the notifiable diseases, as compared with the average of the previous 9 years.

From the last Table it will be noted that the total decrease is as 144 is to 475, and also that the diminution has occurred in each of the four quarters.

If now we omit from our calculations the large number of notifications of Enteric Fever, viz. 1,884, due to the epidemic of the year 1897, as being altogether an exceptional occurrence, we find that the previous 9 years average—this being the whole time the Notification Act has been in force in Maidstone—was 265 against 144 received this year.

Public Hospital.—The total number of admissions here were 69, being made up of the following cases:—

Diphtheria	34
Scarlet Fever	34
Small Pox	1

The only deaths were two from Diphtheria, equalling a case mortality of this disease, of 5·8 %. The case mortality of Diphtheria of cases not removed to hospital was 31·2%. The fact, however, must not be lost sight of, that many cases when notified are in a far too critical condition to warrant removal. Large doses of Anti-Diphtheritic Serum are administered immediately on the patient coming into hospital, with the above highly satisfactory result.

The cost of maintenance of Staff and Patients is set forth in the following Table:—

1900.	Staff.				Patients.			
Month.	No. of Days.	Cost. £	s.	d.	No. of Days.	Cost. £	s.	d.
January	199	11	14	1	138	8	1	6
February	193	11	7	0	146	7	8	3
March	217	12	15	2	196	10	17	5
April	210	12	7	0	404	21	13	6
May	217	12	15	2	366	17	9	0
June	210	12	7	0	287	13	14	0
July	217	12	15	2	237	11	14	8
August	217	12	15	2	242	11	12	6
September	210	12	7	0	188	9	11	8
October	217	12	15	2	216	11	9	6
November	210	12	7	0	308	15	8	5
December	217	12	15	2	218	10	10	8
Total	2534	£149	0	1	2946	£148	11	1

THE WATER SUPPLY.

The Public have been supplied during the whole year with water derived from the green-sand at Forstal and from the chalk at Boarley and Cossington, excepting from January 23rd to July 9th, when, owing to boring operations, the Forstal supply was cut off. The water from Ewell is supplied as last year only to a few cottages on the outskirts of the borough, and to Barming Asylum. In each case the supply has been analysed once a week, with the results that appear in the tables of the Appendix. These Tables form a valuable local standard of purity, and although the labour in carrying out these delicate chemical analyses has been very considerable, yet it must not be considered as altogether spent in vain, since it has enabled the investigator to understand more thoroughly the variations that may occur from time to time from causes that are not to be taken as indicating those of a dangerous character. In addition to the analyses, all the gathering grounds and filtering beds have been regularly inspected, and I am pleased to say that the gathering grounds at Cossington, to which I called attention in my report of 1899, have now been effectually protected against persons or cattle gaining access.

The reservoir at Barming is also effectually protected by an unclimable staked fence 6ft. high, with barbed wire on the top, rendering it practically impossible, situated as it is on the main highway, for any passing individual to gain access for any purpose whatever.

The water supply to houses and cottages in Queen's Road is not at all satisfactory, occupiers of cottages having to draw their supply from a well situated near Hills' Cottages. This water has been examined several times, as the appended Table shows. It will be noted that the water varies considerably; on no occasion was it equal to the standard of local rag stone water, as the water drawn from this source should be. The variable amount of nitrogen as nitrates—on one occasion it being as high as 1·547 parts per 100,000, indicates that the water contained in the well has passed through sewage-polluted soil. It is perfectly true that this constituent indicates past pollution, and is no longer active, but should specific pollution at any time gain access to the soil and the purifying effect of nitrifying organisms be from any cause ineffectual, then this water might be the source of a local epidemic of water-borne disease.

Date.	Total Solids.	Chlorine.	Nitrogen as Nitrates.	Ammonia.		Oxygen absorbed in 4 hrs. at 80° F.	Hardness.		Colour and appearance in 2-foot tube.	Phosphoric Acid.	Smell
				Free.	Albuminoid.		Total.	Perman't			
Jan. 3.	72.5	3·4	1·028	·02	·08	...	30·9	12·4	cl. green	none	none
Feb. 6.	60·5	3·3	·205	·01	·03	·003	31·8	13·5	turbid & brown	traces	none
Mar. 5.	67·5	3·9	·329	·00	·02	...	36·4	15·1	greenish, v.s.turbid	traces	none
Nov.23.	72·0	4·2	1·547	·00	·00	...	36·8	15·5	cl. green	traces	none

In the appendix will be found a copy of a special report regarding the street hydrants that were found from a sanitary point of view to be inefficient. In my opinion the matter is one of urgent public importance and the defects should be remedied without delay.

METEOROLOGY.

The detail of meteorological observations is set forth in the appendix. The mean reading of the barometer for the year is 30·08 inches, the highest monthly mean being for December, 30·74, and the lowest for February, 29·78. The hottest month was July, giving a mean of the maximum readings of the thermometer in the shade of 76·9, while the coldest month was February, with a mean of maximum readings of 42·9. The prevailing winds were S.W., there being 128 days on which the wind was in this quarter. The total rainfall for the year was 18·59 inches, the heavier amounts falling in January, February and June, while March was unusually dry.

GENERAL SANITARY CONDITION AND PROGRESS.

From Mr. Bunting, the Borough Surveyor, I learn that the following works of Sanitary interest have been carried out during the year:—

"Seventy-two new houses have been erected, 25 have undergone alterations, or have been added to. 25 Buildings of the Warehouse or Public Buildings class have been erected, also 4 new W.C.'s. 70 connections have been made to Public Sewers.

"During the year the following Sewer extensions have been made:—

Sewers.

Blewitt Street	635ft.	9in. Pipe.
Buckland Road	1181ft.	9in. Pipe.
Buckland Hill	700ft.	
Total	2516ft.	

Surface Water.

Blewitt Street	552ft.	9in. Pipe.
Muir Street	300ft.	9in. Pipe.
Westree Estate..........	1100ft.	9in., 12in. 15in.
Total	1952ft.	

"The following Sewers have been removed, and entirely renewed:—

Sewers.

Hart Street	1028ft. 9in. Pipe.
Museum Avenue	98ft. 9in. Pipe.
Total	1126ft.

Surface Water.

Hart Street	835ft. 9in. Pipe.

"Or a total length of nearly 1¼ miles of new Sewers.

"The following new road has been laid out:—

Blewitt Street	480ft. in length.

"New ventilating shafts have been fixed in the following streets, mostly at the termination or summit of sewers, and especially at points where nuisance from smell emanating from sewers was complained of, to take the place of the Surface Ventilator.

Bower Mount Road	At summit of Sewer.
Bower Lane	At top of Hill.
Douglas Road	At Bower Lane.
Gladstone Road	By Peel Street Hedges.
Hastings Road	Near St. Philip's Church.
Knightrider Street	Corner by All Saints' Church.
Milton Street	Junction of Charlton Street.
Queen's Road..........	Asylum Gate.
Tonbridge Road	By St. Michael's Schools.
,, ,, ...	By Cornwallis Playground.
,, ,, ...	By Ivy Cottages.
Upper Fant Road	By Corner of Lower Fant Road.
,, ,, ...	By Junction with Whitmore St.
Terrace Road..........	At summit of Sewer Victoria St.
Western Road	At Tonbridge Road.
Oakwood Road	At Termination of Sewer."

I have received from Mr. Jackling, the chief Sanitary Inspector the following Table of work accomplished in his department:—

Table showing the Number of Houses and other Premises dealt with by Notice or otherwise.

Houses without drainage or re-constructed	303
Drains repaired or cleansed	574
Old drains trapped from sewer and ventilated	4
Sink and other waste pipes dis-connected from drains	62
Rain-water pipes dis-connected from drains	24
Trapped stoneware gullies provided in lieu of defective brick and bell traps	389
Manure pits constructed	6
Cesspools emptied, cleansed, and filled up	8
W.C.s repaired or cleansed	525
Houses provided with new W.C s, or re-constructed	105
W C s provided with water supply and flushing apparatus	644
W C. basins with flushing rims removed, and new and sufficient basins substituted	562
Old Pan Closets with containers and "D" traps removed	20
Soil Pipes removed outside Dwellings and ventilated	26
Soil Pipes ventilated	8
Construct or repair Urinals	6
Remove water in Cellars	3
Houses provided with Ashpits or Dustbins	345
Houses provided with shooting, or repaired	22
Houses cleansed and lime-washed	93
House roofs repaired	73
Back Yards paved with cement concrete or other impervious material	147
House refuse removed on complaint	108
Houses supplied with Company's Water	25
Overcrowding	28
Remove manure	13
Remove Pigeons, Poultry, and Animals	12
Miscellaneous	70
New Glazed Stoneware Pipe Drainage laid ....13,793 feet	
New Cast-iron Pipe Drainage laid .... 523 ,,	
Totals ....14,316 ,,	4185

Dairies, Cowsheds and Milkshops Order, 1885.—Under the above Act frequent inspections have been made, with the result that in one instance proceedings were instituted against the occupier, and a fine inflicted.

In the early part of the year I was instructed to make enquiries concerning certain Dairies supplying the Borough with milk. The result of these enquiries is embodied in a special report in the appendix. In one case the Borough was receiving a supply of milk from a Dairy that was far from sanitary, but on making representations to the proper quarter, these defects were at once remedied.

BAKEHOUSE REGULATION ACT.—These premises have from time to time been inspected and the provisions of the Act carried out.

FACTORY AND WORKSHOPS ACT.—The provisions of this Act have also been complied with.

CANAL BOATS ACT.—No infectious disease has been notified as occurring under this Act, and regular inspections have been made.

HOUSING OF THE WORKING CLASSES ACT.—Under the provisions of this Act my predecessor reported in June, 1899, that certain sanitary defects existed in Kingman's Yard in Upper Stone Street, and Dann's Yard in High Street. The owners of these properties were requested to carry out the necessary alterations to put them into a sanitary condition, and this has been done satisfactorily.

The overcrowding that was reported as existing in Thorner's Yard, in Upper Stone Street has been abated.

As regards Temple Court, in Week Street, consisting of fifteen houses stated to be unfit for human habitation, Nos. 1 to 11 have been closed, and the sanitary defects in Nos. 12, 13, 14, and 15, consisting mainly of overcrowding, have been remedied.

The remaining three houses in School Court, High Street, have now been closed, so that at the present time this filthy court no longer remains a blot on the sanitary condition of the Borough.

Diseased Meat.—During the year two important prosecutions were instituted against butchers for selling and exposing for sale carcases of animals suffering from tuberculosis. In one case two sides of a boar pig were seized as being unfit for human food, and after examination by a Justice were destroyed. Proceedings were taken against the butcher and a fine of £2 and costs was inflicted by the magistrates.

In the second case a forequarter of beef affected with generalized tuberculosis was found hanging in a butcher's shop, and on examining the remainder of the meat exposed for sale about 25 stone was found to be affected. The whole of it was seized and condemned. Subsequent proceedings instituted against the butcher resulted in him being fined £8 2s. in all.

Both of these shops were situated in the poorer parts of the town, and I have little doubt that these prosecutions will have a very salutary effect in checking the sale of such meat and of ridding Maidstone of a certain unenviable notoriety as regards the possibility of disposing of carcasses of the above description.

I have the honour to be,
Mr. Mayor and Gentlemen,
Your obedient Servant,
C. PYE OLIVER.

Westdene, Maidstone,
February 2nd, 1901.

TABLE I.—FOR WHOLE DISTRICT.

YEAR.	Population estimated to Middle of each year.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.		DEATHS AT ALL AGES. TOTAL.		DEATHS IN PUBLIC INSTITUTIONS.	Deaths of Non-residents registered in District.	Deaths of Residents registered beyond District.	DEATHS AT ALL AGES. NETT.	
		Number.	*Rate.	Number.	Rate per 1,000 Births register'd.	Number.	*Rate.				Number.	*Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1890.	33,190	832	24·59	96	115	589	17·7	145	121	—	468	14·1
1891.	32,210	871	27·03	121	140	691	21·4	220	173	47	585	18·1
1892.	32,475	887	27·31	90	102	747	22·3	239	159	49	588	18·1
1893.	32,743	791	24·15	87	111	621	18·9	238	150	57	528	16·1
1894.	33,011	862	26·11	110	128	679	20·5	229	164	55	515	15·5
1895.	33,282	830	24·93	107	129	667	20·0	230	165	46	502	15·0
1896.	33,555	818	23·91	108	133	649	19·3	200	150	38	499	14·8
1897.	33,831	765	22·60	105	138	848	25·0	279	242	—	606	17·9
1898.	34,109	714	20·93	108	152	660	19·0	236	214	—	446	13·0
1899.	34,389	820	23·84	106	129	702	20·4	179	168	—	528	15·5
Averages for years 1890-1899.	33,279	819	24·5	103	127	683	20·3	219	170	48	526	15·79
1900.	34,658	813	23·45	94	115	710	20·4	313	215	53	548	15·81

* Rates calculated per 1,000 of estimated population.

NOTE.—The deaths included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of illness, and dying there; and by the term "Residents" is meant persons brought into the district on account of illness, and have died elsewhere.

Area of District in acres (exclusive of area covered by water) — 4,008 acres.

Total population at all ages, 32,145 ...... }
Number of inhabited houses, 6,007 ...... } At Census of 1891.
Average number of persons per house, 5·37 }

TABLE II.

Year.	Whole District.				East Maidstone.				West Maidstone.			
	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each Year.	Births registered	Deaths at all Ages.	Deaths under 1 year.
	a.	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*
1890	33,600	832	468	96	17,768	472	258	..	15,832	360	210	..
1891	32,210	871	585	121	16,577	484	335	..	15,633	387	250	..
1892	32,475	887	588	90	16,694	501	337	..	15,781	386	251	..
1893	32,743	791	528	87	16,813	440	293	..	15,930	351	235	..
1894	33,011	862	515	110	16,931	493	292	..	16,080	369	223	..
1895	33,282	830	502	107	17,051	428	271	..	16,231	402	231	..
1896	33,555	818	499	108	17,172	468	278	..	16,383	350	221	..
1897	33,831	765	606	105	17,293	425	287	..	16,538	340	319	..
1898	34,109	714	446	108	17,415	394	232	..	16,694	320	214	..
1899	34,389	820	528	106	17,538	445	304	..	16,851	375	224	..
Averages of Years 1890-1899	33,320	819	526	103	17,125	455	289	..	16,195	364	237	..
1900	34,658	813	548	94	17,699	*	322	62	16,959	*	226	32

TABLE III.

Cases of Infectious Disease Notified during the Year 1900.

Notifiable Disease.	Cases notified in Whole District.							Total Cases Notified in each Locality.		No. of Cases Removed to Hospital from each Locality.	
		At Ages—Years.									
	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	East Maidstone	West Maidstone	East Maidstone	West Maidstone
Small Pox	1	..	..	..	..	1	..	..	1	..	1
Cholera............	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	50	..	15	26	7	2	..	19	31	12	22
Membranous Croup..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	20	1	1	3	3	11	1	10	10	..	..
Scarlet Fever	45	..	4	35	6	..	..	22	23	15	19
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	28	..	2	4	11	11	..	11	17	..	..
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..
Continued Fever	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	.. H.	..	..
Totals	144	1	22	68	27	25	1	62	82	27	42

TABLE IV.

Causes of, and Ages at, Death during Year 1900.

Causes of Death.	Deaths in Whole District at subjoined Ages.							Deaths in Localities (at all Ages).		Deaths in Public Institutions.
	All Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	East Maidstone	West Maidstone	
Small Pox	..	..	..	..	..	..	..	..	..	..
Measles	4	1	2	1	..	..	..	2	2	1
Scarlet Fever	..	..	..	..	..	..	..	..	..	..
Whooping Cough	4	2	1	1	..	..	..	4	..	..
Diphtheria and Membranous Croup	7	..	6	1	..	..	..	2	5	4
Croup	..	..	..	..	..	..	..	..	..	..
Typhus	..	..	..	..	..	..	..	..	..	..
Fever Enteric	1	..	..	..	1	..	..	1	..	1
Other continued	..	..	..	..	..	..	..	..	..	..
Epidemic Influenza	24	..	1	..	2	8	13	12	12	1
Cholera	..	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..	..
Diarrhœa	11	7	3	..	..	..	1	10	1	1
Enteritis	9	7	..	..	..	..	2	4	5	..
Puerperal Fever	..	..	..	..	..	..	..	..	..	..
Erysipelas	..	..	..	..	..	..	..	..	..	..
Other Septic Diseases	1	..	..	..	..	1	..	1	..	..
Phthisis	44	1	2	2	6	30	3	21	23	9
Other Tubercular Diseases	20	9	4	3	2	2	..	10	10	2
Cancer, Malignant Disease	33	..	..	..	..	17	16	21	12	8
Bronchitis	48	14	2	..	..	7	25	28	20	1
Pneumonia	60	9	10	2	5	21	13	39	21	8
Pleurisy	2	..	..	..	1	1	..	1	1	..
Other Diseases of Respiratory Organs	2	1	..	..	..	..	1	1	1	..
Alcoholism Cirrhosis of Liver ..	14	..	..	..	..	11	3	9	5	5
Venereal Diseases	3	..	..	..	..	3	..	1	2	2
Premature Birth	14	14	..	..	..	..	..	11	3	..
Diseases & Accidents of Parturition	4	..	..	..	3	1	..	3	1	..
Heart Diseases	51	2	..	6	1	21	21	28	23	9
Accidents	18	1	1	..	3	10	3	5	13	4
Suicides	6	..	..	..	..	5	1	5	1	..
All other causes	168	26	15	7	1	45	74	96	72	42
All causes	548	94	47	23	25	183	176	315	233	98

TABLE V.

BOROUGH OF MAIDSTONE, 1900.

AREA. The area is 4,008 acres, divided into two divisions, East and West, by Week Street, Gabriel's Hill, and Stone Street; all to the West, including the Western sides of those Streets, constituting West Maidstone; the East Side, East Maidstone.

The Area of	East Maidstone	....	2,019 acres.
	West ,,	....	1,989 ,,

ELEVATION. The population reside at a mean Elevation of 70 feet above the sea level, ranging from 20 to 120.

HOUSES. At the census of 1891 there were { West 2,693 / East 3,314 } =6007 inhabited houses, containing on an average { West 5·8 / East 5·0 } =Whole Borough 5·37 persons to a house

ANNUAL RATEABLE VALUE of Property in the Borough for the Poor Rate is £151,754.

DENSITY (1900)	East..................	8·7 persons per acre.
	West	8·5 ,, ,,

POPULATION, estimated to the middle of 1900	Total 34,658	East Maidstone............	17,699.
		West ,, ...	16,959.

BIRTHS.	Males.... 393	Total 813
	Females.. 420	

Annual Rate of Births per 1,000....Whole Borough 23·45.

DEATHS.	Males.... 286	Total 548	East Maidstone 322	Whole Borough..548.
	Females.. 282		West ,, ... 226	

Annual Rate of Mortality per 1,000....East Maidstone 18·1....West Maidstone 13·3....Whole Borough 15·81.

Excess of Births over Deaths....Whole Borough 265.

TABLE VI.—BOARLEY WATER.

Date of Collection of Sample.	Total Solids.	Chlorine.	Nitrogen as Nitrates.	Ammonia.		Oxygen absorbed in 4 hrs. at 80° F.	Hardness.		Colour and appearance in 2-foot tube.	Smell	Phosphoric Acid.
				Free.	Albu-minoid.		Total.	Perman't			
Jan. 1st...	42·5	2·1	·896	·00	·00	·005	23·2	5·4	clear green	none	free
,, 8th...	38·0	2·3	·316	·00	·05	·003	23·4	6·2	,,	,,	traces
,, 15th...	40·0	2·2	·746	·00	·02	·005	24·0	5·0	,,	,,	free
,, 22nd...	38·5	2·2	·279	·00	·02		23·6	6·4	,,	,,	traces
,, 29th...	39·5	2·5	·748	·00	·02	·005	25·2	5·7	,,	,,	,,
July 5th...	37·0	2·3	·419	·00	·01	·004	24·3	6·8	,,	,,	free
,, 12th...	38·0	2·4	·286	·00	·01	·005	23·8	7·5	,,	,,	,,
,, 20th...	45·5	2·4	·213	·00	·01	·004	27·8	7·6	,,	,,	,,
,, 26th...	45·0	2·4	·172	·00	·02	·005	24·5	7·3	,,	,,	traces
Mar. 5th...	39·0	2·2	·264	·00	·01		27·5	7·6	,,	,,	free
,, 13th...	38·5	2·5	·241	·00	·01		25·5	7·7	,,	,,	v. s. traces
,, 19th...	40·0	2·5	·222	·00	·02		26·5	7·8	,,	,,	traces
,, 27th...	38·5	2·6	·255	·00	·01	·003	31·4	9·3	,,	,,	s. trace
April 3rd...	38·5	2·7	·213	·00	·01	·004	28·4	7·5	,,	,,	traces
,, 9th...	40·0	2·8	·230	·00	·01	·003	30·2	7·5	,,	,,	,,
,, 17th...	40·0	2·5	·243	·00	·01	·003	30·0	8·1	,,	,,	,,
,, 24th...	40·0	2·7	·233	·00	·01	·002	30·9	8·3	,,	,,	,,
,, 30th...	32·5	2·2	·456	·00	·01	·003	31·5	7·3	,,	,,	,,
May 7th...	45·0	2·3	·895	·00	·03	·003	28·0	8·7	,,	,,	,,
,, 15th...	41·5	2·3	·897	·00	·03	·004	28·4	8·5	,,	,,	,,
,, 22nd...	41·0	2·4	·831	·00	·03	·003	28·3	8·0	,,	,,	free
,, 29th...	38·0	2·4	·929	·00	·01	·004	27·6	8·1	,,	,,	traces
June 5th...	44·5	2·4	·925	·00	·02	·002	28·2	7·7	,,	,,	free
,, 11th...	46·5	2·4	·765	·00	·01	·003	27·6	9·1	,,	,,	traces
,, 18th...	43·0	2·4	·674	·00	·01	·002	27·7	10 2	,,	,,	free
,, 26th...	44·5	2·4	·792	·00	·00	·003	31·2	9·5	,,	,,	traces
July 3rd...	38·5	2·4	·589	·01	·00	·004	20·8	7·2	,,	,,	,,
,, 9th...	43·5	2·3	·765	·00	·01	·002	27·6	7·3	,,	,,	,,
,, 16th...	41·5	2·4	·658	·00	·00	·005	29·1	7·3	,,	,,	,,
,, 23rd...	42·0	2·4	·740	·00	·01	·003	28·6	7·7	,,	,,	,,
,, 30th...	44·0	2·4	·658	·00	·00	·002	31·2	7·4	,,	,,	,,
Aug. 7th...	42·5	2·4	·872	·00	·01	·004	29·6	7·5	,,	,,	,,
,, 14th...	36·0	2·5	·711	·00	·01	·003	29·5	7·6	,,	,,	,,
,, 20th...	38·5	2·4	·711	·00	·03	·002	29·5	7·5	,,	,,	,,
,, 27th...	55·0	2·4	·823	·00	·02	·005	29·3	7·5	,,	,,	free
Sept. 4th...	37·5	2·5	·917	·00	·01	·004	28·8	7·5	,,	,,	traces
,, 11th...	36·5	2·5	·767	·00	·01	·003	28·2	7·9	,,	,,	,,
,, 17th...	38·5	2·5	·557	·01	·01	·002	28·4	8 3	,,	,,	,,
,, 24th...	48·0	2·5	·853	·00	·01	·003	28·3	8·4	,,	,,	,,
Oct. 1st...	38·0	2·5	·600	·00	·01	·002	28·4	6·5	,,	,,	free
,, 8th...	32·5	2·5	·823	·00	·01	·003	28·6	7·9	,,	,,	traces
,, 15th...	27·0	2·5	·596	·00	·01	·002	27·5	7·7	,,	,,	free
,, 22nd...	37·5	2·4	·751	·00	·00	·003	27·7	7·5	,,	,,	,,
,, 29th...	44·0	2·5	·658	·00	·01	·002	27·2	7·8	,,	,,	,,
Nov. 5th...	40·0	2·5	·823	·00	·01	·003	27·4	7·6	,,	,,	traces
,, 12th...	43·5	2·5	·823	·00	·01	·004	27·5	6·3	,,	,,	,,
,, 19th...	41·5	2·3	·794	·00	·01	·001	29·5	7·7	,,	,,	free
,, 26th...	45·0	2 5	·773	·00	·00	·003	27·2	7·1	,,	,,	,,
Dec. 3rd...	40·0	2·4	·698	·00	·00	·004	26·4	7·5	,,	,,	traces
,, 10th...	46·5	2·4	·876	·00	·01	·003	27·4	8·7	,,	,,	,,
,, 17th...	40·0	2·5	·658	·00	·01	·004	28·2	7·8	,,	,,	,,
,, 24th...	39·5	2·4	·740	·01	·01	·003	27·4	8·5	,,	,,	,,
Mean results of above analyses.	40·5	2·4	·643	·00	·01	·003	27·9	7·6	clear green	none	traces

All results are given in parts per hundred thousand, except Free and Albuminoid Ammonia which are in parts per million.

TABLE VII.—COSSINGTON WATER.

Date of Collection of Sample.	Total Solids.	Chlorine.	Nitrogen as Nitrates.	Ammonia.		Oxygen absorbed in 4 hrs. at 80° F.	Hardness.		Colour and appearance in 2-foot tube.	Smell	Phosphoric Acid.
				Free.	Albuminoid.		Total.	Perman't			
Jan. 1st...	37·0	2·1	·746	·00	·02	·005	21·8	5·5	clear green	none	free
,, 8th...	40·0	2·1	·306	·00	·00	·003	22·9	6·8	,,	,,	traces
,, 15th...	45·0	2·1	·348	·01	·00	·004	23·8	4·8	,,	,,	free
,, 22nd...	42·2	1·9	·238	·00	·02	...	22·8	5·5	,,	,,	,,
,, 29th...	37·5	2·0	·477	·00	·02	·004	22·0	5·5	,,	,,	traces
Feb. 5th...	42·5	2·0	·267	·00	·02	·003	23·7	5·5	,,	,,	,,
,, 12th...	37·0	2·2	·238	·00	·01	·004	22·9	5·9	,,	,,	,,
,, 20th...	40·0	2·3	·238	·00	·02	·003	29·1	8·8	,,	,,	free
,, 27th...	45·0	2·3	·138	·00	·02	·004	25·5	6·5	,,	,,	,,
Mar. 5th...	38·5	2·3	·263	·00	·02	...	26·4	6·6	,,	,,	traces
,, 13th..	37·5	2·4	·230	·00	·02	...	26·0	7·5	,,	,,	free
,, 19th...	36·0	2·6	·203	·00	·02	...	27·0	8·1	,,	,,	,,
,, 27th...	40·5	2·7	·228	·00	·01	...	30·4	9·2	,,	,,	,,
April 3rd...	34·0	2·6	·220	·00	·02	·005	29·8	8·3	,,	,,	traces
,, 9th...	39·0	2·6	·223	·00	·02	·003	29·0	8·5	,,	,,	,,
,, 17th...	32·5	2·4	·263	·00	·02	·004	28·8	8·2	,,	,,	,,
,, 24th...	35·0	2·2	·256	·00	·01	·005	29·4	8·5	,,	,,	,,
,, 30th...	35·5	2·2	·347	·00	·04	·005	30·6	6·7	,,	,,	free
May 7th...	40·5	2·3	·795	·00	·03	·005	26·6	6·5	,,	,,	traces
,, 15th...	38·0	2·2	·724	·00	·02	·002	27·0	6·5	,,	,,	free
,, 22nd...	43·5	2·3	·765	·00	·04	·002	27·4	5·8	,,	,,	traces
,, 28th...	40·5	2·2	·707	·00	·02	·003	27·2	5·8	,,	,,	,,
June 5th...	39·0	2·3	·765	·00	·04	·005	27·0	5·4	,,	,,	,,
,, 11th...	44·0	2·3	·658	·00	·02	·004	28·0	8·7	,,	,,	,,
,, 18th...	37·5	2·2	·658	·00	·01	·004	28·8	9·5	,,	,,	,,
,, 25th...	40·5	2·2	·858	·00	·03	·003	31·2	9·5	,,	,,	,,
July 3rd...	27·5	2·5	·274	·00	·02	·002	25·4	6·4	,,	,,	free
,, 9th...	42·5	2·4	·436	·00	·02	·003	25·1	6·3	,,	,,	traces
,, 16th...	46·5	2·4	·493	·00	·01	·003	27·5	6·2	,,	,,	,,
,, 23rd...	42·0	2·4	·493	·00	·01	·005	29·5	6·3	,,	,,	,,
,, 30th...	36·0	2·3	·527	·00	·01	·004	31·1	6·5	,,	,,	,,
Aug. 7th...	37·0	2·3	·572	·00	·01	·005	32·6	6·3	,,	,,	,,
,, 14th...	37·5	2·3	·528	·00	·02	·004	32·9	6·4	,,	,,	free
,, 20th...	39·0	2·5	·493	·00	·02	·004	31·4	6·3	,,	,,	,,
,, 27th...	43·0	2·2	·576	·01	·02	·002	31·6	6·6	,,	,,	,,
Sept. 4th...	43·0	2·5	·711	·00	·01	·003	30·0	6·8	,,	,,	trace
,, 11th...	40·0	2·3	·600	·00	·02	·005	29·5	6·5	,,	,,	,,
,, 17th...	35·5	2·4	·510	·00	·02	·004	29·8	6·5	,,	,,	,,
,, 24th...	37·5	2·3	·598	·00	·01	·005	27·6	6·8	,,	,,	,,
Oct. 1st...	37·0	2·4	·329	·00	·01	·004	26·8	6·8	,,	,,	traces
,, 8th...	37·5	2·4	·600	·00	·01	·005	27·5	7·5	,,	,,	free
,, 15th...	30·5	2·2	·876	·00	·01	·004	25·4	6·6	,,	,,	,,
,, 22nd...	38·0	2·3	·547	·00	·01	·004	25·5	6·5	,,	,,	,,
,, 29th...	37·0	2·3	·493	·00	·01	·003	25·4	6·3	,,	,,	traces
Nov. 5th...	41·0	2·1	·534	·00	·01	·002	25·8	6·9	,,	,,	,,
,, 12th...	36·0	2·3	·510	·01	·03	·006	25·2	5·5	,,	,,	,,
,, 19th...	40·0	2·1	·547	·00	·01	·002	26·0	6·8	,,	,,	,,
,, 26th...	33·5	2·3	·534	·00	·01	·004	26·6	6·9	,,	,,	,,
Dec. 3rd...	33·2	2·3	·353	·01	·01	·006	26·2	6·4	,,	,,	,,
,, 10th...	31·0	2·2	·600	·00	·01	·004	26·0	7·5	,,	,,	,,
,, 17th...	37·5	2·4	·370	·00	·03	·004	26·2	6·9	,,	,,	,,
,, 24th...	38·5	2·2	·430	·01	·01	·002	28·1	7·9	,,	,,	,,
Mean results of above analyses.	38·3	2·2	·474	·00	·02	·003	27·3	6·7	clear green	none	traces

All results are given in parts per hundred thousand, except Free and Albuminoid Ammonia, which are in parts per million.

TABLE VIII.—EWELL WATER.

Date of Collection of Sample.	Total Solids.	Chlorine.	Nitrogen as Nitrates.	Ammonia.		Oxygen absorbed in 4 hrs. at 80° F.	Hardness.		Colour and appearance in 2-foot tube.	Smell	Phosphoric Acid.
				Free.	Albuminoid.		Total.	Perman't			
Jan. 1st...	40·1	3·0	·853	·00	·02	·006	21·1	7·2	clear green	none	free
,, 8th...	41·5	2·9	·306	·00	·00	·002	21·5	7·3	,,	,,	traces
,, 15th...	45·5	3·0	·402	·00	·01	·005	21·3	6·3	,,	,,	,,
,, 22nd...	50·0	3·1	·230	·00	·01	...	21·2	7·8	,,	,,	free
,, 29th...	43·5	3·0	·345	·00	·00	·005	21·2	7·2	,,	,,	,,
Feb. 5th...	38·5	2·9	·330	·00	·03	·004	21·7	7·5	,,	,,	traces
,, 12th...	39·5	3·1	·205	·00	·00	·007	23·0	9·9	,,	,,	,,
,, 20th*											
,, 26th*											
Mar. 5th...	42·0	3·0	·255	·00	·00	...	25·8	8·4	,,	,,	traces
,, 13th...	40·0	3·1	·197	·00	·01	...	25·6	7·1	,,	,,	,,
,, 19th...	42·5	3·4	·222	·00	·01	...	26·1	8·7	,,	,,	,,
,, 27th...	36·0	3·4	·234	·00	·01	...	27·8	10·3	,,	,,	,,
April 3rd...	32·5	3·4	·205	·00	·01	·003	25·2	8·5	,,	,,	,,
,, 9th...	40·0	3·4	·231	·00	·01	·002	24·6	8·7	,,	,,	,,
,, 17th...	39·5	3·2	·462	·00	·01	·003	24·6	8·7	,,	,,	,,
,, 24th...	40·5	3·0	·143	·00	·06	·004	26·6	8·9	,,	,,	,,
,, 30th...	40·5	3·1	·358	·00	·04	·004	26·0	8·5	,,	,,	,,
May 7th...	34·0	3·0	·831	·01	·02	·004	23·4	7·8	,,	,,	,,
,, 15th...	37·5	3·1	·477	·00	·02	·005	23·1	8·3	,,	,,	,,
,, 22nd...	40·5	3·1	·699	·00	·02	·005	23·2	7·5	,,	,,	free
,, 29th...	41·0	3·2	·723	·00	·01	·005	23·3	6·8	,,	,,	,,
June 5th...	37·5	3·0	·493	·00	·01	·004	23·4	6·4	,,	,,	traces
,, 11th...	35·5	3·1	·740	·00	·01	·002	23·6	10·5	,,	,,	,,
,, 18th...	35·0	3·0	·329	·00	·03	·005	28·4	10·5	,,	,,	,,
,, 26th...	36·0	3·1	·357	·00	·00	·005	29·4	12·5	,,	,,	free
July 3rd...	33·0	3·2	·394	·00	·00	·004	26·2	6·7	,,	,,	,,
,, 9th...	41·0	3·1	·600	·00	·01	·004	27·5	7·2	,,	,,	traces
,, 16th...	41·0	3·1	·703	·00	·01	·002	27·9	7·7	,,	,,	,,
,, 23rd...	40·0	3·1	·436	·00	·04	·004	28·6	7·9	,,	,,	,,
,, 30th...	41·5	3·0	·493	·00	·00	·002	31·6	9·2	,,	,,	,,
Aug. 7th...	37·5	3·0	·600	·00	·00	·006	32·2	9·1	,,	,,	,,
,, 14th...	37·5	3·1	·329	·00	·01	·002	32·0	9·3	,,	,,	,,
,, 20th...	38·0	3·1	·329	·00	·01	·005	31·2	9·4	,,	,,	,,
,, 27th...	55·0	3·2	·547	·00	·01	·004	32·4	9·5	,,	,,	,,
Sept. 4th...	37·0	3·1	·794	·00	·00	·002	28·9	8·7	,,	,,	,,
,, 11th...	36·5	3·1	·456	·00	·01	·004	27·5	8·9	,,	,,	,,
,, 17th...	33·0	3·1	·499	·00	·01	·003	28·6	8·5	,,	,,	,,
,, 24th...	43·0	3·2	·493	·01	·01	·006	26·8	8·7	,,	,,	,,
Oct. 1st...	46·5	3·1	·218	·00	·02	·005	26·6	7·5	,,	,,	,,
,, 8th...	38·0	3·0	·658	·00	·01	·006	26·8	7·9	,,	,,	free
,, 15th...	42·5	3·1	·705	·00	·00	·003	23·7	7·9	,,	,,	,,
,, 22nd...	43·5	3·0	·525	·00	·01	·005	25·2	8·0	,,	,,	traces
,, 29th...	37·5	3·1	·566	·00	·00	·006	23·4	8·3	,,	,,	,,
Nov. 5th...	42·5	3·1	·709	·00	·00	·004	25·5	8·5	,,	,,	,,
,, 12th...	38·5	3·1	·674	·00	·01	·003	24·6	7·7	,,	,,	,,
,, 19th...	41·5	3·0	·629	·00	·01	·004	25·6	8·2	,,	,,	,,
,, 26th...	42·5	3·1	·668	·00	·03	·002	24·8	8·1	,,	,,	,,
Dec. 3rd...	32·5	3·0	·604	·00	·00	·003	25·4	7·9	,,	,,	,,
,, 10th...	43·0	3·1	·704	·00	·01	·002	24·8	8·5	,,	,,	,,
,, 17th...	38·5	3·1	·703	·00	·01	·006	27·5	8·1	,,	,,	,,
,, 24th...	40·8	3·0	·320	·00	·01	·004	26·1	8·5	,,	,,	,,
Mean results of above analyses.	39·4	3·0	·492	·00	·01	·003	25·4	8·3	clear green	none	traces

All results are given in parts per hundred thousand, except Free and Albuminoid Ammonia, which are in parts per million.

*In consequence of a flood, the filter beds and pumping station at Barming were inundated, and the area usually supplied by Ewell water was served by water from Cossington.

TABLE IX.—FORSTAL WATER.

Date of Collection of Sample.	Total Solids.	Chlorine.	Nitrogen as Nitrates.	Ammonia.		Oxygen absorbed in 4 hrs. at 80° F.	Hardness.		Colour and appearance in 2-foot tube.	Smell	Phosphoric Acid.
				Free.	Albu-minoid.		Total.	Perman't			
Jan. 1st...	45·5	2·6	·260	·00	·00	·006	25·6	5·8	sl. turbid, with a greenish tinge	none	traces
,, 8th...	43·7	2·7	·040	·01	·00	·002	25·7	6·3		,,	,,
,, 16th...	40·5	2·8	·020	·02	·01	·008	26 6	5·5		,,	,,
July. 9th...	45·5	2·8	·04	·01	·02	·003	31·6	7·5		,,	,,
,, 16th...	41·0	2·9	·01	·00	·03	·004	31·9	8·4	,,	,,	,,
,, 23rd...	48·0	2·8	·02	·04	·02	·002	31·6	7·9	,,	,,	free
,, 30th...	46·0	2·9	·02	·00	·01	·005	32·6	9·3	,,	,,	traces
Aug. 7th...	40·0	2·9	·03	·00	·01	·001	32·9	9·2	,,	,,	,,
,, 14th...	39·5	2·9	·03	·00	·02	·005	34·1	9·4	,,	,,	free
,, 21st...	40·0	2·9	·04	·00	·01	·003	34·4	9·5	,,	,,	,,
,, 27th...	45·5	3·0	·038	·00	·00	·006	34·2	9·7	,,	,,	traces
Sept. 4th...	38·0	3·0	·04	·00	·01	·006	32·6	8·5	,,	,,	,,
,, 11th...	39·6	2·9	·016	·01	·01	·002	30·4	8·4	,,	,,	,,
,, 17th...	35·0	3·0	·043	·00	·02	·005	30·4	7·0	,,	,,	,,
,, 24th...	39·5	3·1	·043	·00	·03	·004	31·6	7·5	,,	,,	,,
Oct. 1st...	40·0	3·1	·013	·01	·01	·003	30·6	7·7	,,	,,	,,
,, 8th...	37·0	3·1	·032	·01	·01	·004	29·4	7·8	,,	,,	,,
,, 15th...	40·0	3·0	·043	·00	·02	·006	29·3	6·7	,,	,,	,,
,, 22nd...	36·0	3·0	·035	·00	·01	·006	31·8	7·5	,,	,,	free
,, 29th...	39·5	3·1	·04	·00	·01	·005	38·2	7·4	,,	,,	traces
Nov. 5th...	41·5	3·0	·041	·00	·02	·005	31·5	7·8	,,	,,	,,
,, 12th...	37·5	3·1	·042	·01	·00	·002	30·2	5·9	,,	,,	,,
,, 19th...	42·5	3·0	·032	·00	·04	·006	32·8	7·8	,,	,,	,,
,, 26th...	39·0	3·0	·032	·01	·01	·006	30·0	7·2	,,	,,	,,
Dec. 3rd...	23·5	2·9	·02	·01	·01	·002	31·8	8·1	,,	,,	,,
,, 10th...	44·5	3·1	·04	·00	·01	·005	31·4	7·8	,,	,,	,,
,, 17th...	41·5	2·9	·045	·01	·02	·007	30·8	8·5	,,	,,	,,
,, 24th...	40·8	3·0	·052	·00	·00	·005	31·4	8·9	,,	,,	,,
Mean results of above analyses.	40·7	2·9	·044	·00	·01	·004	30·8	7·7	sl. turbid, with a greenish tinge.	none	traces

All results are given in parts per hundred thousand, except Free and Albuminoid Ammonia, which are in parts per million.

TABLE X.—MONTHLY RECORD OF METEOROLOGY.

MONTHS.	Mean Reading of the Barometer.	TEMPERATURE.			DEW POINT TEMPERATURES.				Mean Degree of Humidity Sat. Point = 100.	RELATIVE PROPORTION OF WIND.								RAIN.	
		Of the Air.		Of Radiation.	9 a.m.		7 p.m.												
		Mean of Maxim'm in Shade.	Mean of Minim'm in Shade.	Mean of Max'm in Sun Rays	Wet.	Dry.	Wet.	Dry.		N.W.	N.	N.E.	E.	S.E.	S.	S.W.	S.	No. of d's it fell.	Amount Collect'd.
																			Inches.
January ..	30·06	43·0	33·2	62·5	37·7	38·5	39·3	40·0	94·1	7	2	5	..	3	2	11	1	21	2·60
February ..	29·78	42·9	32·7	63·8	35·9	36·9	37·3	39·0	90·4	4	..	7	..	5	..	12	..	17	2·88
March	30·22	47·3	32·7	76·8	35·5	38·9	39·2	45·8	72·3	4	4	11	1	8	..	3	..	3	·19
April	30·16	56·1	38·7	88·4	46·1	48·7	47·8	50·1	80·1	3	..	3	1	7	3	11	2	8	·72
May	30·10	63·8	42·0	92·9	46·4	52·6	51·5	54·2	62·5	1	..	9	1	7	2	11	..	6	·73
June	29·87	68·0	50·4	97·5	57·6	60·9	59·8	61·2	72·9	8	..	4	..	4	..	13	1	14	2·69
July	29·91	76·9	55·4	113·2	63·5	67·8	66·0	71·9	75·7	9	2	2	..	5	..	12	1	5	1·43
August	29·93	70·8	51·9	97·9	59·1	62·6	60·1	63·8	77·9	10	1	6	..	3	..	10	1	14	1·39
September..	30·20	65·1	46·5	88·4	56·9	59·0	57·5	60·0	79·2	9	2	6	..	6	..	5	2	6	·83
October....	30·13	59·7	43·7	75·1	50·0	53·3	50·4	52·5	95·3	11	3	3	..	..	..	14	..	12	1·29
November..	29·92	49·0	32·1	62·7	44·2	44·6	45·4	46·9	95·9	2	1	6	1	5	4	7	4	20	1·93
December..	30·74	47·7	28·4	59·1	43·3	43·6	39·5	45·1	98·5	1	..	1	..	2	5	19	3	19	1·91
Means	30·08	57·5	40·6	91·5	48·2	50·6	47·9	52·5	82·9	Sum. 69	15	63	4	55	16	128	15	145	18·59

Report regarding the Street Hydrants.

To the Chairman and Members of the Sanitary Committee.

Gentlemen,

I have recently received from your Sanitary Inspector a sample of water which was stated to have been drawn from a tap off the Water Company's supply at Chillington Street, Maidstone.

In this sample of water were two nematodes or thread worms, known as *Gordius aquaticus (Dujardin).*

I at once instituted enquiries as to how these could have entered the water system, seeing that the greatest care is exercised at the grounds at Cossington, from which this particular house draws its supply, and it seemed to be impossible for them to enter here.

Every possible precaution has been adopted here to prevent such coarse contamination, the collecting tanks being formed of solid brickwork, set in cement throughout roof, floor and sides. The man-holes giving access to the tanks are protected by a closely fitting iron cover and frame erected above the level of the surrounding ground, and further protected by a small guard house, with a solid concrete bottom. The pipes leading from these collecting tanks are of cast iron, with lead joints.

In searching for a possible point of entry of this coarse contamination, and in consultation with Mr. Ware, we learned that the hydrants throughout the whole of the water system are of a pattern that when adopted some 40 years back were considered excellent, but is now obsolete, allowing of insuction when from any reason the hydraulic pressure is reduced. This may happen under the following circumstances:—

1.—When it is necessary to effect any repairs in the main or its branches, the water supply of necessity is turned off in the mains supplying that portion of the system requiring repair.

2.—When during certain seasons of the year it is necessary to have an intermittent instead of a constant supply of water.

The arrangement of the hydrant now in use, a sketch of which is attached, is such that there is a receptacle between the surface of the road and the main capable of holding a gallon of water. This receptacle becomes filled with water washed off the surface of the roads, and hence may, and doubtless often does contain all kinds of filth. This polluted water is kept out of the mains when full by a vulcanite ball, maintained in position in an indiarubber socket by the pressure of water in the main. When however under the circumstances above mentioned the pressure in the main is reduced, down goes the ball, and these dangerous surface washings gain access to the water mains, there being in fact an actual communication between the road and the main, through a space large enough to admit a man's hand.

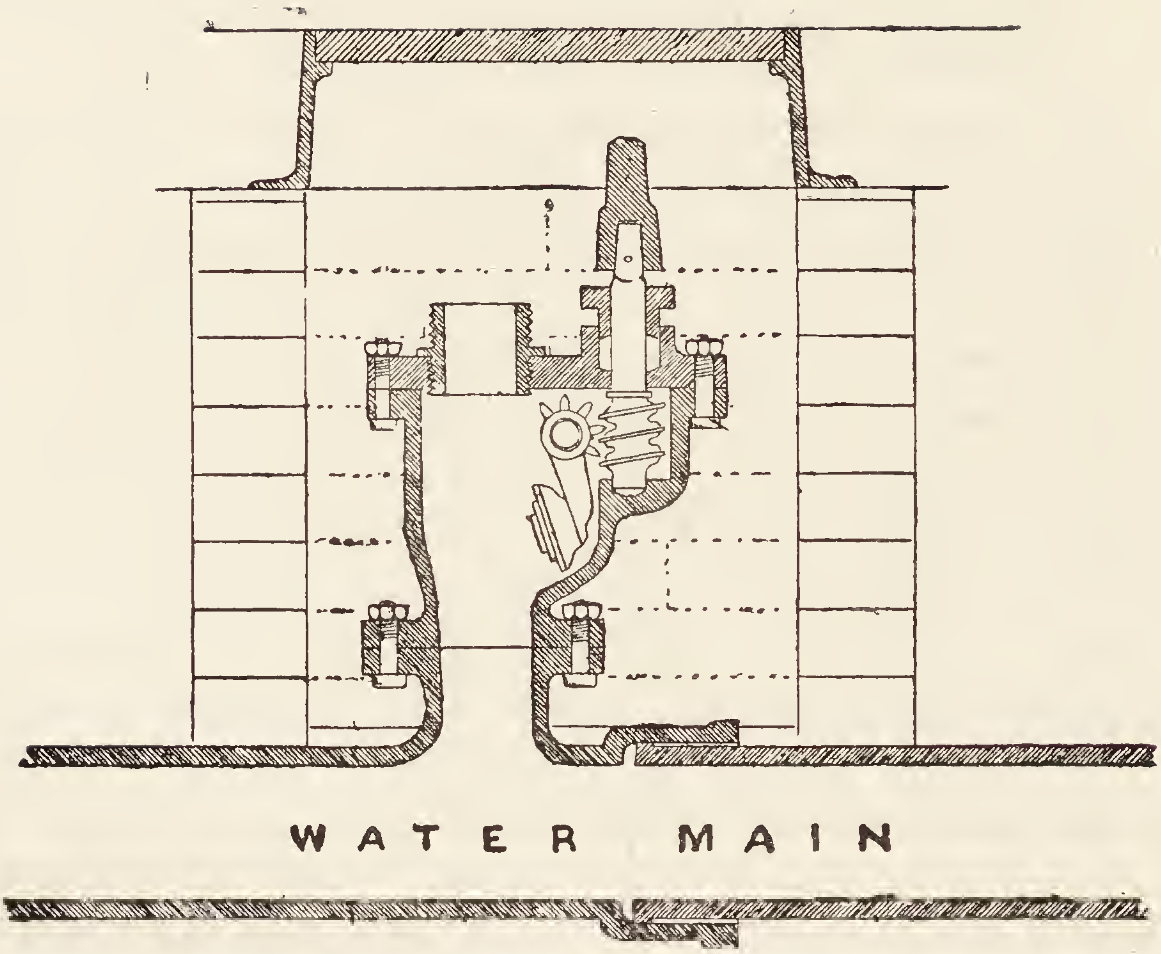
In all there are 279 of these obsolete hydrants on the water system, and in consequence we have that number of points of great danger where at any moment specific polluting material may enter.

I cannot urge too strongly the danger we are incurring to the health of the inhabitants, and the very great importance of remedying without delay such a defective system.

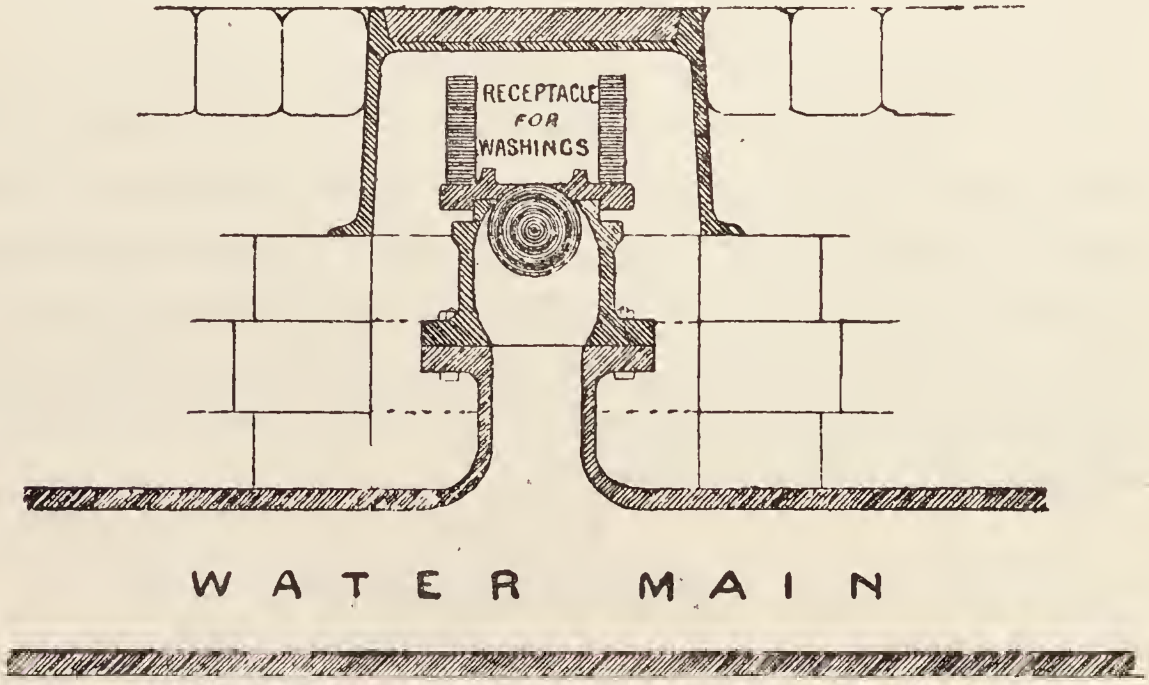
It may be of interest to state that briefly the history of this nematode is that in its embryo stage it burrows into certain insect larvæ, which are swallowed by water beetles and other aquatic predatory insects, and in the bodies of these insects they become encysted. In due course they are discharged into the water, and here finding suitable surroundings, develop into young and perfect nematodes, some 4in. long, such as were contained in the specimen submitted.

I am, Sir,
Your obedient Servant,
C. PYE OLIVER,
Medical Officer of Health.

November 20th, *1900.*



SUGGESTED HYDRANT.



HYDRANT NOW IN USE.

Report concerning Dairies.

To the Chairman of the Sanitary Committee.

Dear Sir,

In accordance with instructions received from the above Committee, and accompanied by Mr. Jackling, the Sanitary Inspector of the Borough, I have inspected certain Dairies supplying milk to consumers, and for retail purposes, in the Borough of Maidstone.

The First Dairy Inspected.

This Dairy has 12 cows, and provides Maidstone with 20 gallons of milk morning and evening. The cow-shed was clean, well drained, and there was ample air space for this number. The dairy itself was beautifully clean and of excellent design, having been originally built as a dairy for the Mote House.

The adjoining cottage, occupied by the dairyman, has a very primitive means for the disposal of the sink waste. The sink itself is constructed of bricks, and the waste runs into a pail kept underneath, the pail being emptied, as occasion may require, just outside the cottage door. Here was seen a dark filthy accumulation that certainly should be removed, and better means adopted for its future disposal, since milk is peculiarly liable to absorb noxious vapours, and to form an excellent pabulum for germs to thrive in and to multiply on should they gain access to it.

Water Supply.—The cows drink water from a shallow well, the cesspool of the premises being well away from this, but a privy is on higher ground and only 50ft. away. Chemical examination of this supply, however, shows that it is not contaminated with sewage. The cans are stated to be washed with water from a well, well situated in a meadow away from risk of contamination, but the labour involved is considerable in obtaining this supply, and in my opinion there is a great temptation to use the nearer, but unfortunately worse, supply.

Illness among helpers.—There were two men employed, and I failed to elicit any evidence of diarrhœa or sickness among them or their families.

A record of all houses and shops supplied in Maidstone by this purveyor has been compiled, and comprises, in the morning 83 houses and 8 retailers, and in the afternoon 88 houses and 9 retailers. One of the customers, who is also a retailer supplied by this dairy, had Enteric Fever in his house, but I was informed that no milk had been delivered for retail purposes for the last month. I left instructions that this particular establishment was not to retail milk at present.

The Second Dairy Inspected.

All the milk yielded by this dairy is sent to one retailer in Maidstone, and is despatched in two consignments, morning and evening. In all 30 cows are kept, and these are inspected once a fortnight by a Veterinary Surgeon. No means are taken to detect Tuberculosis by the Tuberculin test. The cow shed allows ample air space, and was clean and well drained; the dairy itself was also in good order, and every precaution was taken to ensure cleanliness.

Water Supply.—The Cows drink water from a lake of beautifully clear water, fed by a spring adjoining the farmyard, and well away from risk of pollution from the sewage of the yard. The cans are washed, and the occupier of the dairy and his family drink water derived from a deep well in the dairy itself. The cesspool is some 60 feet away, and on lower ground, and there is no danger of the well being contaminated by leakage from the cesspool. Chemical analysis shews the water to be of great organic purity.

Illness.—Three milkers are employed, and there has been no diarrhœa or sickness among them.

The Third Dairy Inspected

Supplies 12 gallons of milk daily for the morning delivery in Maidstone. There were 8 cows in a very dirty badly-ventilated shed, the walls of which were in a filthy state. The shed itself is absolutely without any drains, the liquid sewage running into a narrow ditch at the rear of the shed, where it evidently soaks away through the ground. In the yard itself were heaps of decomposing manure and pools of liquid filth.

Water Supply.—The cows are said to have water from a rain water tank in the centre of the yard, only a few feet away from the shed and 30 feet away from a cesspool. The cans are said to be washed in water from a well 300 feet deep, but I have strong reasons to believe that such is not the case. Chemical examination of this water, moreover, proves it to be highly polluted with sewage, and quite unfit for use in a dairy or for potable purposes.

On the opposite side of the road is a shallow pond which receives sewage from the yard and cow shed; an examination of the soft mud at the edge of the pond disclosed marks of hoofs of cows.

Illness.—There was no evidence forthcoming of diarrhœa or sickness among the workers in the dairy.

The above dairy is, in my opinion, far from being in a proper sanitary condition, and after conferring with yourself and the Town Clerk, I suggested to the retailer that it would be wiser not to have milk from this supply until the dairy was placed in a proper sanitary condition. This suggestion was immediately complied with, and the milk then in stock scalded before delivery.

I have privately communicated the above facts to the Medical Officer of Health in whose district the dairy is situated, and he will himself inspect it, but I am informed that the owner himself is now putting it into a better sanitary condition.

The Fourth Dairy Inspected

Furnishes about 180 gallons of milk daily to Maidstone, Ashford, Ramsgate, and Shorncliffe. In Maidstone two retailers are supplied, one having 12 gallons daily and the other 10 gallons. The cows themselves, 66 in number, were in excellent condition, and were well housed in three separate sheds. The largest shed was of excellent design for air space and for water supply. The shed is washed out once a week, and is bricked at bottom except where the animals stand, where the floor is made up of a bed of chalk and ashes. The walls were clean, having been recently lime-washed, and the floor well drained, and there was no accumulation of liquid filth or sewage. Fresh cows coming to the dairy are isolated for a week in case of any being afflicted with an infectious malady.

Water Supply.—Both for cows and for washing cans, is derived from a well just outside the well-kept dairy, and is 20ft. deep, but the cesspool is well away from this, and on a lower level; this supply of water fails in the summer. Another supply is at the present being laid on from a more permanent source, and where there is no inhabited house for fully 500 yards.

Illness.—Careful enquiries were made as to illness among the milkers; several had been away with influenza, but there was no evidence either of diarrhœa or of scarlet fever, although the latter was known to be present in the neighbouring village.

During these inspections the occupiers have afforded us every assistance, both in supplying information and in shewing us over their premises, although all these dairies are situated outside the area over which I, as your Medical Officer of Health, have any control.

I have the honour to be,
Sir,
Your faithful Servant,
C. PYE OLIVER,
Medical Officer of Health.

Results of Chemical Analyses of Waters derived from above Dairies.

Source.	Date of Collection of Sample.	Total Solids.	Chlorine.	Nitrogen as Nitrates.	Ammonia.		Oxygen absorbed in 4 hours.	Hardness.		Colour and appearance in 2-foot tube.	Smell	Phosphoric Acid.
					Free.	Albuminoid.		Total.	Perman't			
Dairy No. 1...	1900 Mar. 9 ...	80·0	3·7	·304	·01	·05	·003	32·8	6·3	brownish tinge and turbid	none	free
,, 2...	,, 7 ...	37·5	2·2	·238	·00	·00	·004	29·2	6·2	cl. green	,,	,,
,, 3...	,, 7 ...	67·5	7·6	·345	·08	1·8	·006	40·0	9·4	green, v'y s'ly turbid	,,	traces
,, 5...	,, 20 ...	35·5	6·3	·238	·00	·05	·003	25·8	12·3	,,	,,	free

All results are given in parts per hundred thousand, except Free and Albuminoid Ammonia, which are in parts per million.